

**Table S1:** Effects of  $\omega$ -conotoxins in mechanical PWTs of healthy mice.

Compound	Dose (pmol /paw)	Number of mice (n)	Mechanical PWT (g)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	3.2 $\pm$ 0.2	2.7–3.8	(3, 32) = 0.5
MVIA	6.0	6	3.2 $\pm$ 0.2	3.0–3.4	
CVIF	6.0	6	3.1 $\pm$ 0.2	2.7–3.6	
Control	–	18	3.3 $\pm$ 0.1	3.2–3.5	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S2:** Effects of  $\omega$ -conotoxins in thermal PWTs of healthy mice.

Compound	Dose (pmol /paw)	Number of mice (n)	Thermal PWT ( °C)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	50.7 $\pm$ 0.5	49.6–51.7	(3, 32) = 0.8
MVIA	6.0	6	49.8 $\pm$ 0.5	48.6–51.0	
CVIF	6.0	6	50.8 $\pm$ 0.8	48.7–52.9	
Control	–	18	50.1 $\pm$ 0.3	49.6–50.8	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S3:** Locomotor side-effects (paw slips) of  $\omega$ -conotoxins in healthy mice.

Compound	Dose (pmol /paw)	Number of mice (n)	Paw-slips		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	11.3 $\pm$ 2.8	4.0– 18.7	(3, 32) = 3.2
MVIA	6.0	6	11.0 $\pm$ 1.8	6.5– 15.5	
CVIF	6.0	6	10.5 $\pm$ 1.5	6.6– 14.4	
Control	–	18	17.0 $\pm$ 1.5	13.7–20.3	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S4:** Locomotor side-effects (distance covered) of  $\omega$ -conotoxins in healthy mice.

Compound	Dose (pmol /paw)	Number of mice (n)	Distance covered (m)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	1.7 $\pm$ 0.2	1.3– 2.1	(3, 32) = 0.8
MVIA	6.0	6	1.8 $\pm$ 0.3	1.0– 2.6	
CVIF	6.0	6	1.7 $\pm$ 0.4	0.8– 2.6	
Control	–	18	2.1 $\pm$ 0.2	1.8– 2.5	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S5:** Locomotor side-effects (**ataxia index**) of  $\omega$ -conotoxins in healthy mice.

Compound	Dose (pmol /paw)	Number of mice (n)	Ataxia index		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	6.9 $\pm$ 1.7	2.5–11.3	(3, 32) = 1.0
MVIA	6.0	6	6.7 $\pm$ 1.6	2.7– 10.9	
CVIF	6.0	6	7.3 $\pm$ 1.8	2.5– 12.0	
Control	–	18	9.0 $\pm$ 0.9	7.0– 11.1	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S6:** Effects of  $\omega$ -conotoxins in surgery-induced mechanical allodynia

Compound	Dose (pmol / paw)	Number of mice (n)	Mechanical PWT (g)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	1.4 $\pm$ 0.1	0.9–1.9	F (5, 30) = 12.4
MVIA	6.0	6	2.6 $\pm$ 0.2****	2.2–3.2	
	2.0	6	2.6 $\pm$ 0.3****	1.4–3.7	
	0.6	6	1.9 $\pm$ 0.2*	1.3–2.3	
CVIF	6.0	6	1.4 $\pm$ 0.1	1.2–1.7	
Control	–	6	1.3 $\pm$ 0.2	0.9–1.4	

PWT (Paw withdrawal threshold), CI (Confidence interval). Statistical significance was determined using one-way ANOVA with Dunnett's post-test; \*,  $P < 0.05$ ; \*\*\*\*,  $P < 0.0001$  compared with vehicle control.

**Table S7:** Effects of  $\omega$ -conotoxins in surgery-induced thermal allodynia

Compound	Dose (pm/ paw)	Number of mice (n)	Thermal PWT ( °C)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	2.0	6	49.5 $\pm$ 0.5	48.2–50.6	(3, 20) = 1.632
MVIA	2.0	6	49.8 $\pm$ 0.3	48.9–50.6	
CVIF	2.0	6	48.9 $\pm$ 0.4	48.0–49.9	
Control	–	6	48.7 $\pm$ 0.4	47.6–49.7	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S8:** Effects of  $\omega$ -conotoxins in oxaliplatin-induced mechanical allodynia

Compound	Dose (pmol/paw)	Number of mice (n)	Mechanical PWT (g)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	2.9 $\pm$ 0.2****	2.5–3.3	(10, 55) = 12.5
	2.0	6	2.1 $\pm$ 0.3*	1.4–2.8	
	0.6	6	1.8 $\pm$ 0.1	1.5–2.2	
	0.2	6	1.4 $\pm$ 0.1	1.0–1.7	
MVIIA	6.0	6	2.9 $\pm$ 0.2****	2.3–3.5	
	2.0	6	2.2 $\pm$ 0.4*	1.3–3.0	
	0.6	6	2.0 $\pm$ 0.3*	1.2–2.8	
	0.2	6	1.4 $\pm$ 0.2	1.0–1.9	
CVIF	6.0	6	1.7 $\pm$ 0.1	1.3–2.0	
	2.0	6	1.9 $\pm$ 0.2	1.5–2.3	
Control	-	6	1.4 $\pm$ 0.1	1.2–1.6	

PWT (Paw withdrawal threshold) described as the mean  $\pm$  SEM. Statistical significance was determined using one-way ANOVA with Dunnett's post-test; \*,  $P < 0.05$ ; \*\*\*\*,  $P < 0.0001$  compared with vehicle control.

**Table S9:** Contralateral effects of  $\omega$ -conotoxins in OIPN.

Compound	Dose (pmol/paw)	Number of mice (n)	Mechanical PWT (g)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	6.0	6	1.6 $\pm$ 0.2	1.0–2.1	F (3, 20) = 0.1
MVIIA	6.0	6	1.5 $\pm$ 0.2	1.0–2.0	
CVIF	6.0	6	1.6 $\pm$ 0.4	0.6–2.5	
Control	-	6	1.4 $\pm$ 0.1	1.2–1.6	

PWT (Paw withdrawal threshold), CI (Confidence interval).

**Table S10:** Effects of  $\omega$ -conotoxins in cisplatin-induced mechanical allodynia

Compound	Dose (pmol/paw)	Number of mice (n)	Mechanical PWT (g)		
			Mean $\pm$ SEM	95% CI of mean	F (DFn, DFd)
GVIA	2.0	6	1.6 $\pm$ 0.2	1.5–2.5	(3, 20) = 0.2
MVIIA	2.0	6	1.5 $\pm$ 0.2	1.2–2.5	
CVIF	2.0	6	1.6 $\pm$ 0.4	1.3–2.8	
Control	-	6	1.5 $\pm$ 0.1	1.6–2.0	

PWT (Paw withdrawal threshold) described as the mean  $\pm$  SEM, CI (Confidence interval)